

REMARKS

This paper is in response to the Office Action dated September 18, 2007. Claims 13 – 16 stand withdrawn. Claims 1 – 3, 5 – 6 and 9 – 16 are in the application upon entry of this amendment. Entry of this amendment, reconsideration and reexamination of the above-identified application are respectfully requested.

The Examiner required election of species for examination of the claims under PCT Rule 13.1 with respect to the second herbicide (ii), viz., prosulfuron, dicamba, 2,4-D, halosulfuron-methyl and quinclorac. In response to the requirement, Applicants provisionally elected prosulfuron. Applicants affirm the election.

Applicants respectfully traverse the rejection of claims 1 – 3, 5 – 6 and 9 – 12 under 35 USC §103 as being unpatentable over WO/02100173 (Cornes) in view of Kent et al..

By way of summary, the presently claimed invention relates to a process for controlling weeds in a sorghum crop while reducing injury to such crop caused by the post-emergent application of a herbicidally effective amount of mesotrione over such crop, the process comprising the application of a herbicidally effective amount of: (i) mesotrione, and (ii) prosulfuron to the locus of the weeds, wherein the mesotrione is applied post-emergent over such sorghum crop.

The problem that is addressed by the present invention can thus be seen as the provision of a process which allows mesotrione to be used as part of a weed control program in sorghum, given the improved crop safety afforded by the prosulfuron.

The Examiner states that Cornes teaches a synergistic composition comprising mesotrione and a second herbicide, "Prosulfuron is an herbicide that may be added to the composition (see page 4, line 15)". Applicants respectively point out, however, that this quote has been taken out of context. The text to which the Examiner refers relates to additional herbicides that may be added to the binary compositions of Cornes and that "sulphonyl ureas such as nicosulfuron, prosulfuron, bensulfuron can be added to the mixture of mesotrione and pyrifalid for use in rice". Thus, in the context of Cornes, prosulfuron is only considered with regard to a specific tertiary mix of mesotrione, pyrifalid and prosulfuron for use in rice.

The Examiner suggests that the difference between the instant claims and the teaching of Cornes is that Cornes does not teach the use of the composition on sorghum. While this is true, it can be seen that there are additional differences not identified by the Examiner. More specifically, Cornes does not teach the use of prosulfuron as a binary combination with mesotrione in cereals generally; nor does Cornes teach that prosulfuron can be used to reduce the crop injury associated with mesotrione use in sorghum.

Recognizing the deficiencies of Cornes, the Examiner cites Kent for the teaching that sorghum is a cereal crop. The Examiner reasons that since Cornes teaches that the disclosed herbicidal combinations can be used over a wide range of crops, including cereals (page 5, lines 23-24); it would have been obvious that such combinations can be used over sorghum. However, as has been indicated above, Cornes only actually teaches that prosulfuron can be used in combination with mesotrione (and pyritalid) in rice. There is no teaching contained in Cornes to suggest herbicidal combinations comprising mesotrione and prosulfuron might have general utility in cereals. Accordingly, Applicant respectfully submits that the combination is actually made as a result of an improper hindsight analysis in view of the present invention. In the absence of the teaching of the present invention, one of ordinary skill would have no reasonable expectation that the teachings of Cornes and Kent could be combined as suggested by the Examiner in order to arrive at the presently claimed invention.

Moreover, Applicants respectfully submit that in reaching a conclusion of obviousness, the Patent and Trademark Office must consider the "invention as a whole," which includes evidence of the invention's unexpected results. See In re Margolis, 228 USPQ 940 (Fed. Cir. 1986). Neither reference teaches that prosulfuron can be used to reduce the crop injury in Sorghum associated with mesotrione use.

Table 1, pp. 6 – 7 (excerpt)

Active Ingredient	1	2	3
Callisto 4 SC (mesotrione)	105.0	105.0	105.0
COC	1.0	1.0	1.0
UAN	2.5	2.5	2.5
Peak 57 WG (prosulfuron)	-	20.0	40.0

The amounts of herbicide are quoted as a rate equivalent to grams per hectare. The amounts of COC and UAN are quoted in %vol/vol of composition.

Callisto 4 SC is an aqueous mesotrione suspension concentrate, containing 400g/l mesotrione, available from Syngenta. COC is Crop Oil Concentrate available as Agridex. UAN is urea ammonium nitrate, a fertiliser available in bulk. Peak 57 WG is a prosulfuron composition comprising 57% of prosulfuron, available from Syngenta.

Table 2, p. 8 (excerpt)

Composition	Crop (sorghum) damage (%)	Weed Damage (%)	
		Weed 1	Weed 2
1 (Mesotrione)	13.0	40	40
2 (Mesotrione/Prosulfuron)	3.7	50	50
3 (Mesotrione/Prosulfuron)	3.0	56.7	56.7

As the data provided in the description shows (page 8, Table 2), mesotrione treatment alone (row 1) exhibited 13% damage in sorghum – whereas when a combined treatment of mesotrione and prosulfuron was used (column 2) this damage dropped to only 3.7%. Such a reduction in crop damage is both surprising and unexpected.

A favorable reconsideration and a withdrawal of the § 103 rejection are respectfully requested. Applicants submit that the present claims are allowable over the cited art and respectfully request a Notice of Allowance.

Respectfully submitted,

USPTO Customer No. 26748
Syngenta Crop Protection, Inc.
Patent and Trademark Dept.
410 Swing Road
Greensboro, NC 27409
(336) 632-7895

/William A. Teoli, Jr./
William A. Teoli, Jr.
Attorney for Applicants
Reg. No. 33,104

Date: December 18, 2007